

REMARKS

This Amendment and Response are made in reply to the Office Action dated October 31, 2007, in which the Examiner:

Objected to the Abstract;

Objected to the Drawings under 37 C.F.R. § 1.83(a) as failing to show every feature of the claimed invention;

Objected to language of claim 1;

Rejected claims 1-4 under 35 U.S.C. § 112, second paragraph, as being indefinite;

Rejected claims 1 and 2 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,809,833 to Newport et al.; and

Rejected claims 3 and 4 under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 5,809,833 to Newport et al. in view of U.S. Patent No. 4,712,441 to Abraham.

Applicants respectfully address and/or traverse these objections and rejections below. The current amendment amends claims 3 and 4 and adds new claim 5, leaving claims 1-5 pending.

Regarding the objection to the Abstract, Applicants respectfully submit that the above amendment to the Abstract fully addresses the Examiner's objection. Therefore, Applicants respectfully request that the objection to the Abstract be withdrawn.

Regarding the objection to the Drawings, Applicants respectfully submit that the above amendment to claims 3 and 4 fully addresses the Examiner's objection. Therefore, Applicants respectfully request that the objection to the Drawings be withdrawn.

Regarding the objection to claim 1 due to the phrase "by normal or reverse rotation of the shaft", Applicants respectfully submit that use of "normal" is disclosed and described in the specification. Paragraphs [0041] through [0043] of

the Specification discuss the operation of the linear actuator “if an operator pushes an operation button of a normal rotation side to tilt up the bed-plate”. (Specification paragraph [0041]). Given the disclosure for “normal operation” in the Specification, claim 1 does not need to be amended to facilitate clarity. Therefore, Applicants respectfully request that the objection to claim 1 be withdrawn.

Regarding the rejection of claims 1-4 under 35 U.S.C. § 112, second paragraph, as being indefinite, Applicants respectfully submit that the recitations of claim 1 are not indefinite. Claim 1 recites that the position detection apparatus can adjust detection of a position of the moving cylinder in the housing. This recitation is described and supported both by Specification paragraphs [0050] through [0053], as well as by Figures 8-10. Accordingly, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claims 2-4 depend, directly or indirectly, from independent claim 1 and include additional recitations thereto. Therefore, the rejection of claims 2-4 is improper for at least the same reasons stated in connection with claim 1. Additionally, Applicants respectfully submit that the amendment of claims 3 and 4 to remove the recitation “or toward an axis of the moving cylinder” fully addresses the Examiner’s § 112, second paragraph rejection of claims 3 and 4.

Therefore, the rejection of claims 1-4 under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Regarding the rejection of claims 1 and 2 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,809,833 to Newport et al., claim 1 recites a linear actuator comprising a shaft having a male thread portion, a worm gear speed reducer for reducing rotation of a motor in speed and transmitting the rotation to the shaft, a female thread member which is threadedly engaged with the male thread portion and which moves forward and backward by normal or reverse rotation of the shaft, a moving cylinder which is fixed to the female thread member and which moves forward and backward with respect to a housing, and a position detection apparatus which detects a position of the moving cylinder,

wherein the position detection apparatus can adjust detection of a position of the moving cylinder in the housing.

An anticipation rejection is improper unless a single prior art reference shows or discloses each and every claim recitation. Newport does not show or disclose each and every recitation of claim 1. Specifically, Newport does not show or disclose that the linear actuator comprises a position detection apparatus that can adjust detection of a position of the moving cylinder in the housing. Instead, Newport discloses that the positional-encoder potentiometer indicates the position of the extension tube assembly 32. (Newport, col. 6, lines 10-12). Since Newport discloses that mounting bracket 74, which supports the potentiometer 124, maintains the gear backlash between the potentiometer 124 and the lead screw 30, Newport does not show that the potentiometer can adjust detection in the gear housing. (Newport, col. 6, lines 53-62). Since Newport does not show or disclose each and every element of claim 1 of the present invention, Newport does not anticipate claim 1.

Claim 2 of the present invention depends from claim 1 and includes additional recitations thereto. Therefore, Newport does not anticipate claim 2 of the present invention for at least the reasons stated above in connection with claim 1. Additionally, Newport does not show or disclose that the position detection apparatus is movably provided on the housing. Instead, Newport discloses that “[t]he mounting bracket 74 supports the positional encoder-potentiometer 124”. (Newport, col. 6, lines 53-54). Therefore, the position detection apparatus of Newport is not movably provided on the housing, but rather supported by mounting bracket 74. Furthermore, in the citation provided by the Examiner in support of this rejection, Newport discloses that the support bracket 74 functions to locate the gear center distance of the potentiometer so as to maintain the necessary backlash between the gear and the lead screw 30. (Newport, col. 6, lines 57-62). “Locate” is defined as “to set or establish in a particular spot or position.” (“Locate.” Def.2a. Webster’s Third New International Dictionary. 1961.). Therefore, the support bracket 74 disclosed in Newport does not allow the potentiometer to be movably provided on the housing, as the Examiner erroneously states.

Thus, the rejection of claims 1 and 2 under 35 U.S.C. § 102(b) should be withdrawn.

Regarding the rejection of claims 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Newport in view of Abraham, claims 3 and 4 depend from both claims 1 and 2 and include additional recitations thereto. As stated above, claim 1 recites that the position detection apparatus can adjust detection of a position of the moving cylinder in the housing, and claim 2 recites that the position detection apparatus is movably provided on the housing. A *prima facie* case of unpatentability under 35 U.S.C. § 103(a) is established when the teachings from the prior art itself appear to suggest the claimed subject matter to a person of ordinary skill in the art.

The combination of Newport and Abraham does not teach or suggest what claim 1 recites. More specifically, Newport does not teach or suggest that the position detection apparatus can adjust detection of a position of the moving cylinder in the housing. Instead, the potentiometer of Newport maintains gear backlash with the lead screw. (Newport, col. 6, lines 53-62). Therefore, the potentiometer of Newport is not capable of adjusting detection of a position of the moving cylinder in the housing.

Abraham does not add to the teachings of Newport at least in that Abraham also does not teach or suggest that the position detection apparatus can adjust detection of a position of the moving cylinder in the housing. Instead, Abraham also teaches a positional indicating means with a gear 200 that is always engaged with drive gear 146 through idler gear 188 and speed reduction gears 194, 196 and 198. (Abraham, col. 7, lines 50-57). Therefore, the position indicating means of Abraham also cannot adjust detection of a position of a moving cylinder in the housing.

Therefore, the combination of Newport and Abraham does not teach or suggest what claim 1 recites at least in that it does not teach or suggest that the position detection apparatus can adjust detection of a position of the moving cylinder in the housing.

Newport also does not teach or suggest what claim 2 recites. More specifically, Newport does not teach or suggest that the position detection

apparatus is movably provided on the housing. Instead, Newport teaches that the potentiometer is mounted to support bracket 74, which locates the gear wheel of the potentiometer in the proper position. (Newport, col. 6, lines 53-54 and 57-62). Therefore, the potentiometer of Newport is not movably provided on the housing.

Abraham does not add to the teachings of Newport at least in that Abraham also does not teach or suggest that the position detection apparatus is movably provided on the housing. Instead, Abraham discloses a potentiometer 190 that is mounted on a potentiometer bracket 192, which is supported above the base plate 148 by a spaced mounting plate 202 that is mounted with screws 206. (Abraham, col. 7, lines 52-60). Abraham does not teach that any of the components of this potentiometer mounting system are movably provided.

Therefore, the combination of Newport and Abraham does not teach or suggest what claim 2 recites at least in that it does not teach or suggest that the position detection apparatus is movably provided on the housing.

Since neither Newport nor Abraham, nor the combination thereof, teaches or suggests each and every recitation of Applicants' claims 1 and 2, the rejection of dependent claims 3 and 4 under 35 U.S.C. § 103(a) should be withdrawn.

Having addressed and/or traversed each and every objection and rejection, Applicants respectfully requested that the objections and rejections be withdrawn, and claims 1-5 be passed to issue.

Applicants respectfully submit that nothing in the current Amendment constitutes new matter.

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Applicants believe no fees are due in connection with this Amendment and Response. If any fees are deemed necessary, please charge them to deposit account No. 13-0235.

Respectfully submitted,

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